REMARKS

In the Office Action, claims 1, 3-19 and 21-48 were examined with the result that all claims were rejected. In response Applicant has cancelled claims 39, 40 and 43, and re-written claims 1, 19 and 44-48. In view of the above amendments and following remarks, reconsideration of this application is requested.

Claim Amendments

Claims 1 and 19 have been amended to introduce the limitation that the silicone polymer is present in an amount of 56.5 to 76.75% by weight based on the total weight of the composition. As a result, claim 1 is now much the same as previous claim 43 which is now marked as cancelled.

In the "Response to Arguments" section of the Office Action, the Examiner has acknowledged that Landin clearly does not teach or suggest the limitations presented in claims 43 to 48. Accordingly, Applicant believes that it is not necessary to address the Landin citation in view of amending claim 1 to define the amount of silicone polymer present in the composition.

Claim Rejection 35 USC §112

The Examiner has rejected claims 39 and 40 on the basis that the Examiner considers there to be no support for amounts of over 76.75% silicone polymer. These claims have now been deleted rendering the objection moot.

35 USC §103

As mentioned above, the Examiner has acknowledged that previous claim 43 is novel and inventive over Landin and since claim 1 now contains all of the limitations of original claim 43, Applicant believes claim 1 is patentable over Landin. Therefore Applicant considers the Landin citation to be moot in view of the amendments. This also applies to the citation of Landin further in view of Beauchamp which the Examiner has not cited against claim 43.

On page 11 of the Official Action, the Examiner has rejected claims including claim 43 as obvious over Mizutani et al. (JP 55078073). Mizutani et al. do not teach or suggest the composition containing glass frit, glass fibre or mixtures thereof in an amount of from 0.3% to 8% by weight

based on the total weight of the composition. Indeed, the only teaching regarding the amount of glass additive frit points to using an amount of 15% of phosphate frit having a softening temperature of 650°C. (See translation page 14 relating to Example 3).

Mizutani et al. therefore teaches away from using an amount of glass additive in the range of 0.3 to 8% by weight based on the total weight of the composition. Moreover, it is quite clear from the examples of the present application and the attached Declaration of Don Rodrigo that an amount of glass additive (selected from glass frit, glass fibre and mixtures thereof in an amount of 0.3% to 8% by weight) and the combination with mica, provides a significant advantage in the composition of the invention. Indeed, the specification and attached Declaration of Don Rodrigo specifically demonstrate that use of amounts of glass addiditive greater than 8%, such as 10%, give rise to a significantly inferior result.

The choice of the amount of glass frit is not merely a matter of optimization because it might reasonably be expected that a higher amount of glass frit would be useful. Indeed, as discussed later in this response, the prior art relied on urges the use of greater than 8% by weight. It is the present invention which is based on the finding that a selective amount of glass frit in the range of 0.3 to 8% with mica, results in the formation of a cohesive, dimensionally stable and strong ceramic residue in a fire.

The present Application explains in paragraph [0024] that compositions having glass additive greater than 8% by weight, experience sustained volume shrinkage when subject to temperatures of the order of 1000°C.

The volume shrinkage is a very important factor in achieving an effective barrier to fire. One of the key roles for the composition of the invention is to provide insulation in the case of a fire to cables, or to provide a barrier against propogation of the fire across building structures, such as doors or ducts providing passage of services, such as plumbing and cables between rooms and floors within a building. As the Examiner will appreciate, the shrinkage during a fire produces gaps for the passage of fire and also causes distortion of structures producing cracking in insulated structures such as cables and penetrations. The distortion of such structures can lead to failure of essential building communications in the case of a fire. The invention therefore provides significant advantage by increasing the prospect of maintaining essential building communications and power to

allow firefighting and building evacuation. The use of the select amount of glass additive in the range of 0.3 to 8% together with mica cannot be regarded as mere optimization as the Applicant is the first to recognise the significant advantage in dimensional stability and strength of the ceramic char which is provided by using an amount of glass additive in this range.

The Examiner should also note in considering the Mizutani reference that the mica glass component referred to therein is not equivalent to mica *per se*. This is apparent from the explanation on page 5 of Mizutani which refers to devitrified mica glass which is the full name of the composition referred to by the shorthand "mica glass". This material cannot be considered mica, although it is acknowledged that in some compositions Mizutani does include a mica additive "natural mica" in addition to mica glass. However mica glass does contain a significant proportion of glass (20% according to Example 1).

It is also important to recognise that Mizutani et al., like Landin, relates to a coating composition containing a very significant proportion (generally 70% or more) of a solvent such as trichloroethylene. In Example 3, referred to above, the coating contains 250 parts trichloroethylene as the solvent and 100 parts of the composition which comprises 30% silicone resin. Accordingly, the only reference in Mizutani using the low melting glass composition has much less than the required amount of silicone used in the present invention.

The Examiner's reliance on the combination of Mizutani et al. and Takahashi et al. is inappropriate because they adopt incompatible approaches to fire protection. Takahashi is directed to a foamable silicone composition and uses a composition which is sufficiently viscous to trap a dispersed gas phase produced by a blowing agent. As explained in the Rodrigo declaration, (see paragraphs 11 to 13) the presence of a high proportion of a solvent is incompatible with the objective of trapping a gas produced by a blowing agent. A skilled reader of Takahashi et al. would therefore merely consider the teaching to provide an alternative to the solvent based coatings of Mizutani et al. designed for gap filling by expanding to form a foam rather than coating a surface.

Example 1 of the present Application (and the attached Declaration of Don Rodrigo) explicitly demonstrates the advantage of using an amount of glass frit, glass fibre or mixture thereof in the range of 0.3 to 8% by weight of the total composition. Example 1 compares compositions

containing 8% by weight of glass frit with corresponding compositions containing 10% by weight of the same glass frit. Table 1 in Example 1 is reproduced below.

TABLE 1: The effect of mica levels, glass frit levels and firing temperature on percentage volume change

Composition (% wt/wt)	600°C	1030°C
Silicone/mica/peroxide (78:20:2)	+7	+1
Silicone/mica/glass frit A/peroxide (73:20:5:2)	+7	0
Silicone/mica/glass frit A/peroxide (70:5:20:7:5:2)	-1	-7
Silicone/mica/glass frit A/peroxide (68:20:10:2)	+6	-22
Silicone/mica/glass frit A/peroxide (63:30:5:2)	+7	-1
Silicone/mica/glass frit A/peroxide (58:30:10:2)	+2	-45

(- denotes shrinkage)

While compositions of the invention containing 5 and 7.5% by weight of glass frit undergo a relatively minor change of 0, -7 and -1% change in volume, the compositions containing 10% of glass frit undergo a 22 and 45% change in volume respectively. Compositions of the invention also produce residues in the case of a fire which exhibit high strength when compared with compositions in the absence of the glass frit. The Examiner has rejected claim 46 as unpatentable over Mizutani et al. as applied to claim 43 in view of Takahashi et al. (US Patent 5061736). Takahashi further demonstrates the surprising results of the present invention by teaching away from the amount of glass frit in the range of 0.3 to 8% by weight of the total composition. As stated in column 6, lines 36 to 41, Takahashi urges the reader to use glass powder in the range of from 20 to 200 parts by weight and more preferably from 30 to 150 parts by weight per 100 parts by weight of the diorganopolysiloxane. If such teaching were followed and applied to the silicone composition of Mizutani et al. or the present invention, it would call for an amount of glass frit much greater than 10% by weight of the total composition. Composition XXI of Takahashi et al. makes a foaming composition with the amount of glass reduced from a composition XXVII (of 50 parts glass to 147 parts base composition) containing less than 50% diorganopolysiloxane to 10 parts. The composition is recorded as significantly inferior. Clearly the combination of Mizutani and

Takahashi merely teaches away from the use of 56.5% to 76.75% siloxane and 0.3 to 8% glass additive.

IV. Conclusion

An effort has been made to place this application in condition for allowance and such action is earnestly requested.

Respectfully submitted,

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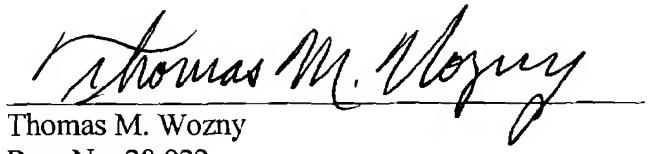

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